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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,770	04/12/2006	Steven Jan Willem Van Lerberghe	NL03 1210 US1	3542
65913	7590	07/13/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER HO, HOANG QUAN TRAN	
			ART UNIT 2818	PAPER NUMBER
			NOTIFICATION DATE 07/13/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/575,770	VAN LERBERGHE ET AL.	
	Examiner	Art Unit	
	Hoang-Quan Ho	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,6,8,9,13-16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7,10-12,17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/12/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of Species I, drawn to fig. 1, claims 1 – 2, 5 – 7, 10 – 12, 16 – 17, and 19 in the reply filed on April 30, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Upon consideration of the elected Species I, drawn to fig. 1, the Examiner has found at least claims 6 and 16 failed to qualify for the elected species. Evidence leading to conclude that claims 6 and 16 are drawn to Species II, fig. 2 can be found in the instant application's specification at pg. 5, lines 10 – 11 and pg. 7, lines 15 – 16. Specifically, claims 6 and 16 at least recite, *inter alia*, a printed circuit board, for which is drawn to fig. 2.

Claims 3 – 4, 6, 8 – 9, 13 – 16, and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species II – IV, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 30, 2007.

Currently, claims 1 – 2, 5, 7, 10 – 12, 17, and 19 are pending.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on April 12, 2006 was filed before the mailing date of the first Office Action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claim 12, e.g. two coils must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 5 recites the limitation "conductive track" at line 2. The Examiner cannot find in the instant application's specification the description "conductive track" to be associated with fig. 1's elements.

Claim Objections

Claims 1 and 12 are objected to because of the following informalities: the limitation "deposited" found at line 2 of claim 1 and line 3 of claim 12 needs to be replaced with another word. Deposited is closely related to fabrication terminology. Applicant is claiming a device, not fabricating a device. Suggested replacement would be "provided". Appropriate correction is required.

Claim 12 is objected to because of the following informalities:

These limitations:

1. "the chip" in line 2
2. "the layer of permeable material" in line 2
3. "the surface" in line 3
4. "the first conductor element" in line 4
5. "the first side" in line 4
6. "the second conductor element" in line 6
7. "the second side" in lines 6 – 7
8. "the interconnection" in line 8
9. "the winding" in line 12

There are insufficient antecedent basis for these limitations in the claim.

The method of writing claim 12 needs to be restructured. At line 14, the limitation "to form a coil as claimed in claim 1" should at least be near the preamble. Such limitation does not entirely agree with the preamble and body language of claim 12.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 2, 5, 7, 10 – 12, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by NmH Hsieh et al. (European Patent App. Pub. No. 0 725 407 A1), hereinafter as IBM.

Regarding claim 1, figs. 2A – 3E of IBM teaches a coil comprising
a layer of permeable material (ref. no. 40) deposited in a chip of an integrated circuit (col. 3, lines 15 – 17) in a plane substantially parallel to a surface of a substrate of the chip (ref. no. 300; as seen in fig. 3A),

a first conductor element (ref. nos. M2 and 70) arranged at a first side of the permeable material (40) facing away from the substrate (as seen in fig. 2A),

a second conductor element (ref. nos. M1 and 10) arranged at a second side of the permeable material opposite to the first side (as seen in fig. 2A),

an interconnection (ref. nos. V1 and 60) for interconnecting a first end of the first conductor element and a first end of the second conductor element (as seen in fig. 2A),

wherein the interconnection, the first conductor element and the second conductor element are arranged for forming a winding around the permeable material (as seen in figs. 2A and 3A), the winding extending in a plane substantially perpendicular to the surface of the substrate (as seen in figs. 2A and 3A).

Regarding claim 2, IBM teaches a coil as claimed in claim 1, IBM teaches wherein the first conductor element is part of the integrated circuit (col. 3, lines 15 – 17).

Regarding claim 5, IBM teaches a coil as claimed in claim 1, IBM teaches wherein the second conductor element comprises a conductive track (col. 4, line 23) on the chip and is arranged between the permeable material and the substrate (as seen in figs. 2A and 3A).

Regarding claim 7, IBM teaches a coil as claimed in claim 1, IBM teaches wherein

a plurality of first conductor elements (ref. nos. M2 and 70) is arranged at a first side of the permeable material facing away from the surface of the substrate (as seen in figs. 2A and 3A),

a plurality of second conductor elements (ref. nos. M1 and 10) is arranged at a second side of the permeable material opposite to the first side (as seen in fig. 2A), and

a plurality of interconnections (ref. nos. V1 and 60) being arranged for interconnecting the plurality of first conductor elements and the plurality of second conductor elements in a chain (as seen in fig. 2A),

wherein the interconnections the first conductor elements and the second conductor elements are arranged for forming a winding around the permeable material for conducting current (i) in turns of the winding (inherent) being substantially perpendicular to the surface (as seen in figs. 2A and 3A).

Regarding claim 10, IBM teaches a coil as claimed in claim 1, IBM teaches wherein the coil, when energized, generates a magnetic field having a direction substantially parallel with the surface (inherent; also see note 1 below).

Note 1: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In essence, apparatus claims cover what a device is, not what a device does. See MPEP § 2114.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In the instant case, generating a magnetic field in a direction would not result in a structural difference. Therefore, it does not distinguish from prior art.

Regarding claim 11, IBM teaches a coil as claimed in claim 1, IBM teaches wherein the coil is arranged (see fig. 2A) for being most sensitive for a magnetic field component having a direction parallel with the surface (inherent; also see note 1 below).

Note 1: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In essence, apparatus claims cover what a device is, not what a device does. See MPEP § 2114.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In the instant case, a magnetic field having a direction would not result in a structural difference. Therefore, it does not distinguish from prior art.

Regarding claim 12, figs. 2A – 3E of IBM teaches an integrated circuit (col. 3, lines 15 – 17) comprising:

the chip (col. 3, lines 15 – 17) with a substrate (ref. no. 300; as seen in fig. 3A), the layer of permeable material (ref. no. 40) deposited in the plane substantially parallel to the surface of the substrate (as seen in figs. 2A and 3A) and

the first conductor element (ref. nos. M2 and 70) arranged at the first side of the permeable material facing away from the substrate (as seen in fig. 2A),

the second conductor element (ref. nos. M1 and 10) arranged at the second side of the permeable material opposite to the first side (as seen in fig. 2A), and

the interconnection (ref. nos. V1 and 60) for interconnecting the first end of the first conductor and the first end of the second conductor element (as seen in fig. 2A),

wherein the interconnection, the first conductor element and the second conductor element are arranged for forming the winding around the permeable material (as seen in figs. 2A and 3A), turns of the winding extending in a plane substantially perpendicular to the surface of the substrate to form a coil as claimed in claim 1 (as seen in figs. 2A and 3A).

Regarding claim 17, IBM teaches an electronic apparatus comprising a coil as claimed in claim 1 (inherent in view of col. 8, lines 27 – 30 and col. 1, lines 12 – 31).

Regarding claim 19, fig. 7 of IBM teaches a two-dimensional antenna (col. 7, lines 11 – 15 teaches that such structure can find wide application in micro-machining structures, however, such inductive structures are also inherently used in communication structures, col. 1, lines 18 – 21) comprising:

a coil (ref. chars. A and A') as claimed in claim 1 (see claim 1 rejection), and
a further coil (ref. chars. B and B') comprising a conductor (col. 7, lines 15 – 17) arranged around the layer of permeable material (col. 7, lines 8 – 9) in a plane substantially parallel to the surface (as seen in fig. 7),

wherein the layer of permeable material forms a core for both the first mentioned coil and the further coil (col. 7, lines 8 – 9).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Quan Ho whose telephone number is (571) 272-8711. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on (571) 272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HQH/
Hoang-Quan Ho
Junior Examiner
July 2, 2007

STEVEN LOKE
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Steven Loke", is written below the printed name and title.